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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,659	01/10/2006	Osami Habuchi	Q85706	5610

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2100 PENNSYLVANIA AVE. NW
WASHINGTON, DC 20037-3213

EXAMINER

BLAND, LAYLA D

ART UNIT	PAPER NUMBER
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1609

MAIL DATE	DELIVERY MODE
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05/30/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/520,659

Applicant(s)

HABUCHI ET AL.

Examiner

Layla Bland

Art Unit

1609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 7-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>01/10/2005, 04/07/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's election without traverse of Group I, claims 1-6, on May 11, 2007 is acknowledged. Claims 7-12 are withdrawn from consideration as being drawn to non-elected invention. Claims 1-6 are examined on the merits herein.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-6 recite the limitation, "substituted or unsubstituted aryl" (or alkyl, alkenyl, alkynyl, acyl, and aralkyl, in the case of claim 1). The specification [page 7] gives a list of which groups these moieties can be substituted with, ending with "or the like." The claims are indefinite because phrase "or the like" leaves the definition of "substituted" open-ended, including elements which are not actually disclosed.

Claims 5 and 6 recite the limitation "a sulfotransferase inhibitor which comprises the galactosamine derivative according to claim 1." "Comprises" is open language, allowing for the inclusion of other elements besides the derivative of claim 1. It is unclear whether the claims are intended to be compound claims or composition claims. The claims have been interpreted as compound claims for the purposes of examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

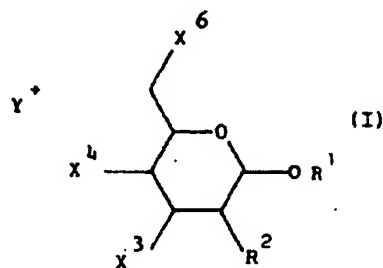
Claims 1, 2, 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Habuchi, et al. (The Journal of Biological Chemistry 1985, Vol. 260, No. 24, 13102-13108, PTO-1449 submitted January 10, 2005).

Habuchi, et al. teach p NP-GalNAc-6-SO₄ [page 13106, column 2, line 43]. In this case, R₅ = SO₃⁻, R₁ and R₂ are both represented by H, R₃ is an acetyl group, X is O, and R₄ is 4-nitrophenyl (a substituted aryl group). The limitations of claims 5 and 6, which are drawn to a sulfotransferase inhibitor which comprises the derivative of claim 1 and inhibits activity of a sulfotransferase having activity of transferring a sulfate group to a hydroxyl group bound to the 6-position carbon atom on the 4-sulfated galactosamine residue in the basic backbone of chondroitin sulfate, are inherent properties of the derivative of claim 1 and thus are also met by this compound.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Dahlgren, et al. (WO 97/00879, January 9, 1997, PTO-1449 submitted January 10, 2005).

Dahlgren, et al. teach compounds of the following formula:

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wherein X^3 , X^4 and X^6 can all be OH or SO_4^- , R^2 can be OH, SO_4^- or substituted amine including NHAc, and R^1 can be hydrogen, alkyl, benzyl, amino acid, nucleotide or polypeptide. When R^2 is NHAc and R^1 is benzyl: The limitations of claim 1 are met when any or all of X^3 , X^4 and X^6 are SO_4^- ; the limitations of claim 2 are met when X^6 is SO_4^- and X^3 and X^4 are both OH; the limitations of claim 3 are met when X^4 is SO_4^- and X^6 and X^3 are both OH; the limitations of claim 4 are met when X^3 is SO_4^- and X^4 and X^6 are both OH. The limitations of claims 5 and 6, which are drawn to a sulfotransferase inhibitor which comprises the derivative of claim 1 and inhibits activity of a sulfotransferase having activity of transferring a sulfate group to a hydroxyl group bound to the 6-position carbon atom on the 4-sulfated galactosamine residue in the basic backbone of chondroitin sulfate, are inherent properties of the derivative of claim 1 and thus are also met by this compound.

Conclusion

No claims are allowed in this application.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Layla Bland whose telephone number is (571) 272-9572. The examiner can normally be reached on M-R 8:00AM-5:00PM UST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on (571) 272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ldb


SHAOJIA ANNA JIANG, PH.D.
SUPERVISORY PATENT EXAMINER